

of other organs, there results the encountering of many technical difficulties from these structures, especially in the surgical treatment of bladder tumors, such as resection with ureteral reimplantation, ureteral transplantation, cystectomy, etc. These, under our present state of development, still carry a very appreciative mortality.

I heartily agree with Doctor Bumpus that the diathermic destruction of bladder growths, especially the large ones, should receive more consideration. It is true that the basic principles in cancer surgery call for the complete dissection of the growth with its draining lymphatics, but this is not always practical in bladder surgery. The technical operative difficulties seem to impose too great a burden on the patient, leading to high mortality. It is beautiful, spectacular surgery for the surgeon, but does not necessarily help the patient. Even if the patient survives this increased surgical risk, morbidity still shows, regardless of the type of treatment, that only 20 to 25 per cent of patients are alive after the usual three- to five-year cure period. Too often these patients are seen late, either because of failure to recognize early signs or the long, insidious course of the disease; there have occurred permanent destructive changes due to infection, obstruction, ureteral dilatation and renal damage, resulting in additional risk for any type procedure. The use of diathermy under complete vision through an open cystotomy, especially in cases giving an almost hopeless prognosis, has made it possible to completely destroy an appreciable number of these growths, especially when extensive, and to finally end up with as many cases benefited as with the other more formidable procedures. The writer has known of a patient to be well after ten years following the diathermic destruction of a Grade 4 growth through a cystotomy.

ENTERITIS OF UNKNOWN ORIGIN*

REPORT OF AN EPIDEMIC IN A CHILDREN'S
INSTITUTION: 27 CASES WITH 6 DEATHS

By J. C. GEIGER, M.D.
San Francisco

BETWEEN February and August, 1936, an outbreak of enteritis occurred in an institution for young babies. The institution is a home for infants, and the physical plant consists of three attractive, well-built, well-planned cottages. The facilities available for the care of infants are excellent, and the four different wards and three other smaller rooms permit of adequate isolation for individual babies or small groups of infants.

FIRST REPORTS

It would seem appropriate to invite attention to certain circumstances involved in the recent incident to be described, and the part played by the Department of Public Health. Babies, to the number of at least 27 were affected, and 6 of these died, during the period of February to August, 1936. The 6 deaths occurred April 10, April 12, May 10, June 4, August 1, and August 10, and the causes of death given included enteritis (unqualified, and as one of two or more causes), and others, as otitis media, mastoiditis, congenital cyst of the cerebrum, and bronchopneumonia. The Department was uninformed, however, of any other instances by the attending physicians or by the other physicians whose advice was sought in consultation or discussion. On routine inspection of the home, for renewal of permit, and following an anonymous inquiry as to "whether everything is all right in

that institution," it was learned that there had been 27 cases and 6 deaths of an affection that had presented definite diagnostic difficulties as well as a definite epidemiologic problem. It is very regrettable that the incident was not reported to the Department of Public Health, for the study that it was possible to make was entirely in retrospect, and reporting of the incident would have permitted a concurrent epidemiologic study which might have been more fruitful.

PREVENTIVE MEASURES

As immediate measures instituted in August, against further cases, no admissions were permitted to the institution, and discharges were to be made only after complete recovery of the child and freedom from all clinical signs of the affection. This limited the incidence to the occupants of the home. For the succeeding period of about four weeks no new cases developed, and the outbreak completely subsided. Laboratory studies of specimens from members of the staff and personnel failed to reveal the carrier state for any of the organisms related to the enteric fevers. Since certain epidemiologic points of interest had not been secured, the study was undertaken in an attempt to compile relevant information from all available sources.

IMPRESSIONS

From the accumulated data, the following impressions are formulated:

1. In both cases and deaths, distribution was equal between males and females.
2. The mean age (on admission), among those affected approximates 30 days, the median being 20 days; in the deaths, however, ages on admission to the institution were 9, 5, 49, 45, 127, and 101 days, respectively.
3. The date of onset in the first cases recorded was February 25 (in cases 1 and 2), 4 and 5 days after admission, respectively.
4. Additional instances occurred for slightly more than five months to the total number of 27, at intervals (between dates of onset of successive cases), of from 7 to 21 days.
5. The time intervals between date of admission and date of onset in individual cases, as nearly as can be ascertained from the record, varied from 1 to 33 days. The longest intervals were 19, 24, and 33, and the shortest was one day. These, possibly even the two and three days' periods also, should be discarded before attempting to determine a mean for the series. It would appear that the normal period between admission and onset dates were seven days, although a variation of four days above or below this mean should be allowed.
6. From the case records alone, it is impossible to formulate accurate impressions of the severity of the diarrhoea. Vomiting, while it did occur, was not always present. In evaluating diarrhoea, one is confronted with meager information from the case records also. An arbitrary definition of a definite change in the number of stools with description of "curdy," "loose," or "watery," and four to five or more stools daily without qualifying

* From the office of the Director, Department of Public Health, City and County of San Francisco.

description, was set up by the Department of Health.

7. Nervous system involvement, *per se*, was not described on the case record. In a supplementary tabulation eye signs, restlessness, opisthotonus, paralysis, paresis, and spasticity of extremities were recorded by the institution's physician.

8. Laboratory study of blood, stool, and cerebrospinal fluid were unproductive of significant findings.

9. In the supplementary tabulation by the institution's physician, other physical signs are recorded, as "cold extremities," "mottled skin," "cyanosis," which might be interpreted as neuro-circulatory changes, but these are not recorded on the case records.

10. Abdominal distension, congested mucous membrane of the throat, loss of weight, dehydration, edema, were all mentioned in the supplementary report of the institution's physician, also; but, again, these are not included in the regular case record.

11. Autopsy findings present no apparent consistent and uniform changes. Definite meningitic reactions were recorded in two instances. Hemorrhagic necrosis of the lining of the lateral ventricles with clumps of blood pigment in the spleen and early pneumonia appeared in two other cases. Otitis media and mastoiditis occurred in one instance. In the first death no definite pathology was noted, and in only two other instances were there any significant changes in the gastro-intestinal tract; in one, a thrombosis of the epiploic veins with points of hyperemia in the wall of the stomach; and in one, mild enteritis without ulceration was recorded.

12. The duration of the illness varied from six to twenty-eight days.

13. The case fatality rate of the series studied, six deaths in twenty-seven cases, is 22 per cent.

SUMMARY

When the Department of Health first learned of the incident which is the basis for this study, about the middle of August, approximately six months after the probable original cases, and the whole subject was discussed with the officials of the institution, it was evident that the affection was a diagnostic problem. From the data available and used in this study, also, there is still a diagnostic problem. The epidemiology, likewise, is obscure. There was some suspicion at the first that the cases were due to a virus, or caused by an atypical form of dysentery with neurologic manifestations. There is no evidence, however, at this time to support either theoretical possibility, except the absence of positive bacteriologic and pathologic data.

One is impressed that the whole series of cases originated in the one or two children admitted in February, apparently with an affection manifesting itself primarily in a diarrhoea, the resulting infection-chain continuing for over five months, involving at least 27 infants, with six fatalities, through some channel not closed by the isolation techniques at first practiced.

101 Grove Street.

ACUTE ANTERIOR POLIOMYELITIS: GYNECOLOGIC SYMPTOMS*

By DWIGHT D. YOUNG, M.D.
Los Angeles

DISCUSSION by Donald G. Tollefson, M.D., Los Angeles; Margaret Schulze, M.D., San Francisco; L. A. Emge, M.D., San Francisco.

IN the recent epidemic of acute anterior poliomyelitis in Los Angeles, during the spring of 1934, and 1935, many unusual symptoms and physical findings were observed. In investigating records of previous epidemics, these unusual features were not recorded and probably did not occur. Among the female patients the prevalence of menstrual dysfunctions, typically appearing at the first menstrual period after the onset of the disease, has led to a more thorough investigation of this particular phase.

It is not our purpose, in presenting this paper, to discuss the epidemiology, symptomatology, or clinical aspects of poliomyelitis. It is important, however, to consider briefly a few of the characteristic features of the Los Angeles epidemic, to enable us to obtain a better understanding of the gynecologic problems presented.

SPECIAL FEATURES IN THE LOS ANGELES OUTBREAK

As you will recall, poliomyelitis, in its typical form, occurs in two distinct types, namely, bulbar and spinal. It is the spinal type with which we are primarily concerned. In the spinal type the motor cells in the anterior horn of the spinal cord are involved, producing a motor paralysis of the skeletal muscles. The paralyses are of the flaccid type, resulting in muscular atrophy from disuse. This usually results in a partial or a total paralysis of the muscle groups affected, which may be temporary or permanent, depending upon the severity of the process. In an article, entitled "Poliomyelitis—The Los Angeles Epidemic of 1934," by Meals, Hauser, and Bower, which appeared in two issues of CALIFORNIA AND WESTERN MEDICINE, August and September, 1935, the authors call particular attention to the atypical paralyses characterizing this epidemic. "The objective findings," they state, "were as atypical as the subjective symptoms. Muscle weakness was often very mild or transient, but pain on motion was sometimes pronounced. Frequently, muscle checks showed no weakness nor asymmetry, sometimes no pain, but a marked fatigability of the affected extremity on repeated tests. Involvement of sensory as well as motor areas of the central nervous system was demonstrated both pathologically and clinically. Symptoms were present in some cases which indicated involvement of the sympathetic nervous system. Recovery has apparently been complete in 80 per cent of patients, some of whom had been severely paralyzed. Sequelae included symptoms of psychogenic and sympathetic nervous system origin."

* Read before the Obstetrics and Gynecology Section of the California Medical Association at the sixty-fifth annual session, Coronado, May 25-28, 1936.